REMARKS

Applicants have carefully considered the October 18, 2004 Office Action, and the amendments above together with the comments that follow are presented in a bona fide effort to address all issues raised in that Action and thereby place this case in condition for allowance. Claims 1-8 are pending in this application. In response to the Office Action dated October 18, 2004, claims 1, 6 and 8 have been amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure as, for example, the depicted embodiments and related discussion thereof in the written description of the specification. Applicants submit that the present Amendment does not generate any new matter issue. Entry of the present Amendment is respectfully solicited. It is believed that this response places this case in condition for allowance. Hence, prompt favorable reconsideration of this case is solicited.

Applicants gratefully acknowledge the Examiner's indication of allowable subject matter. Claim 1 would be allowable if rewritten or amended to overcome the rejection under the second paragraph of 35 U.S.C. § 112. Moreover, the Examiner indicated that claims 2-8 would be allowed if recast in independent form and rewritten or amended to overcome the rejection under the second paragraph of 35 U.S.C. § 112.

Claims 1-8 were rejected under 35 U.S.C. § 112, second paragraph. Applicants respectfully traverse the rejection in view of the foregoing amendments to the claims and the remarks below.

Indefiniteness under the second paragraph of 35 U.S.C. § 112 is a question of law. *Tillotson Ltd. v Walbor Corp.*, 4 USPQ 2d 1450 (Fed. Cir. 1987). Accordingly, in rejecting a claim under the second paragraph of 35 U.S.C. § 112, the PTO is required to discharge its initial burden for providing a basis in fact and/or cogent reasoning to support the ultimate legal

conclusion that one having ordinary skill in art, with the supporting specification in hand, would not be able to reasonably ascertain the scope or protection defined by the claim. *In re Cartwright*, 165 F.3d 1353, 49 USPQ 2d. 1464 (Fed. Cir. 1999). Consistent judicial precedent holds that reasonable precision in light of the particular subject matter involved is all that is required by the second paragraph of 35 U.S.C. § 112. *Miles Laboratories, Inc. v. Shandon, Inc.*, 27 USPQ 2d 1123 (Fed. Cir. 1993); *North American Vaccine, Inc. v. Amercian Cyanamide Co.*, 28 USPQ 2d 1333 (Fed. Cir. 1993); *U.S. v. Telectronics, Inc.*, 8 USPQ 2d 1217 (Fed. Cir. 1988). Applicant stresses that a patent specification must be viewed through the eyes of one having ordinary skill in the art. *Miles Laboratories, Inc. v. Shandon, Inc., supra.*

The Examiner asserted that the phrase "having a window wider than the quasi-uniform homogenized supergaussian beam" recited in claim 1, does not specify any spatial parameter of the supergaussian beam with respect to which the width of the window is compared. Applicants traverse.

Applicants have amended claim 1 for clarity. As described in the specification, the diameter is **2a** and the radius is **a** in the supergaussian expression of $\exp\{-2(r/a)^m\}$. The specification describes that the beam should have quasi-uniform power distribution within a radius **a** which is represented by the supergaussian function $\exp\{-2(r/a)\}$. See page 12, lines 11 to 12 of the specification. Further, when r=a in the supergaussian function, $\exp\{-2(r/a)^m\}$ is reduced to exp(-2). Thus, **a** is the radius of the supergaussian beam. In general, the end of the supergaussian beam should be defined to be the points at which the power falls to exp(-2) of the peak power. Accordingly, one having ordinary skill in the art would not have difficulty understanding the scope of the presently claimed invention, particularly when reasonably interpreted in light of the

supporting specification. Thus, the rejection of claim 1 under the second paragraph of 35 U.S.C. § 112 should be withdrawn.

With respect to claims 6-7, the Examiner alleged that the phrase "diameter of a region of noise appearing at peripheries of the supergaussian beam" is unclear since the term "peripheries" is not defined with any degree of specificity. Applicants respectfully traverse.

With respect to claim 7, the peripheries of the supergaussian beam are the regions outside the supergaussian beam and the size of the supergaussian beam is the same as that defined in claim 1. As described in the specification, the closed loop which is made by connecting the points at which the power decreases to e^{-2} of the peak power is the outline of the supergaussian beam. Outside the supergaussian beam, noise appears due to the preceding homogenizer DOE. The noise is an obstacle for making divided quasi-uniform power patterns by the diverging DOE. Fig. 20 shows a power half distribution of the supergaussian beam traveling via the homogenizer DOE on a section orthogonal to the beam line. The right end of Fig. 20 is the peak (middle) of the supergaussian beam. The right half is omitted in Fig. 20, since the right half is symmetric to the left half. In the supergaussian beam, no noise appears. The X-X line means the outside of the supergaussian beam where no noise arises. In outer regions out of X-X, noise does appear. The noise is induced by the preceding homogenizer DOE. In order to eliminate the outer noise an aperture mask 4 is used. If a window of the aperture mask 4 is smaller than the supergaussian beam, a part of the supergaussian beam is shielded and annihilated. The loss of the beam power is undesirable. Thus, the window of the aperture mask should be larger than the size of the supergaussian beam and the window should shield and kill the noise appearing far outside the supergaussian beam. Accordingly, one having ordinary skill in the art would not have difficulty understanding the scope of the presently claimed invention, particularly when reasonably

interpreted in light of the supporting specification. Thus, the rejection of claim 7 under the second paragraph of 35 U.S.C. § 112 should be withdrawn.

With respect to claim 6, Applicants have amended the claim to clarify that the aperture mask is smaller than a diameter of a region of the noise appearing in regions out of the supergaussian beam where the power is less than e^{-2} of the peak power. The regions lie outside the supergaussian beam. The area of the supergaussian beam is defined as the closed loop which is made by connecting the points at which the power falls to e^{-2} of the peak power. Noise will occur in the regions outside the supergaussian beam. The role of the aperture mask is to shield the noise appearing in the regions outside the beam. The distribution of noise in the outside regions depends upon the homogenizing DOE. The places of a noise appearance can be easily detected by measuring a two-dimensional power distribution at the position of the aperture mask 4 by a power meter. Fig. 20 demonstrates a result of measurement of a one-dimensionally power distribution. By varying diameters of measuring in all directions, two-dimensional power distributions can be obtained. Thus, the range of the size of the window of the aperture mask can be determined. For the reasons outlined above, the Examiner is requested to reconsider and withdraw the rejection of claim 6.

With respect to claim 8, the Examiner alleged that the phrase "a large a/b ratio" is indefinite and the phrase "the aperture mask prepares a linear sectioned supergaussian beam" is confusing. Applicants respectfully traverse.

The phrase "the aperture mask prepares a linear sectioned supergaussian beam" has been removed from claim 8. Moreover, the phrase "a large a/b ratio" has been amended for clarity. The term linear recited in claim 8 signifies a line image having a line or plurality of lines. A line is a limit $b/a \rightarrow 0$ of a rectangle having axb and, therefore, $b/a<1$ can be reasoned from the phrase "a

large a/b ratio". As such, claim 8 has been revised to replace "a large a/b ratio" into "a ratio a/b > 1". A ratio example, as disclosed in the specification, includes a/b=2.

Accordingly, one having ordinary skill in the art would not have difficulty understanding the scope of the presently claimed invention, particularly when reasonably interpreted in light of the supporting specification. The Examiner provided no arguments to justify why one having ordinary skill in the art would have had difficulty understanding Applicant's claimed invention. Therefore, it is respectfully submitted that the imposed rejection of claims 1-8 under 35 U.S.C. § 112, second paragraph is not legally viable and hence, solicit withdrawal thereof.

Applicants note the Examiner's Statement of Reasons for Allowance included on pages 3-4 of the Office action. Entry of that Statement into the record should not be construed as any agreement with or acquiescence by Applicants in the reasoning stated by the Examiner. Applicants positions on the issues appear in Applicants' response. The Statement of Reasons for Allowance should not be used to interpret the cited claims, particularly to the extent if any that the Statement of Reasons for Allowance may differ from the express language of the claims and/or Applicants' positions on patentability of those claims. It is respectfully submitted that the allowed claims should be entitled the broadest reasonable interpretation and broadest range of equivalents that are appropriate in light of the language of the claims, the supporting disclosure and Applicants' prosecution of the claims, without reference to the Statement of Reasons for Allowance.

It is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an

Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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